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*Barbara Queens*  
the provisions of 37 CFR 1.8.

Barbara Owens

November 1, 2006

**Date of Mailing**

**INFORMATION DISCLOSURE STATEMENT IN  
U.S. PATENT APPLICATION NO. 10/588,256**

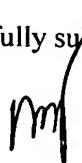
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Sir:

Pursuant to 37 C.F.R. §1.56, the attention of the Patent and Trademark Office is hereby directed to the reference(s) listed on the attached Information Disclosure Statement forms PTO/SB/08a and PTO/SB08b. One copy of each foreign patent and each non-patent reference are attached. It is respectfully requested that the information be expressly considered during the prosecution of this application, and that the reference(s) be made of record therein and appear among the "References Cited" on any patent to issue therefrom.

This Information Disclosure Statement is being filed before the mailing date of a first Office Action on the merits. No certification or fee is required.

Respectfully submitted,



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Steven J. Hultquist  
Reg. No. 28,021  
Attorney for Applicants

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**Enclosures:**

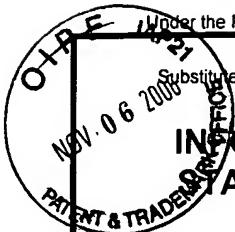
**IDS Forms PTO/SB/08a and PTO/SB/08b [ 3 pg(s).]**

**Foreign Patent References [ 59 pgs.]**

**Non-Patent References [ 107 pgs.]**

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Substitute for form 1449A/PTO

# **INFORMATION DISCLOSURE STATEMENT BY APPLICANT**

*(Use as many sheets as necessary)*

Sheet 1 of 3

**Complete if Known**

Application Number	10/588,256
Filing Date	7/29/2006
First Named Inventor	Schreier et al.
Art Unit	1724
Examiner Name	Not Yet Assigned
Attorney Docket Number	4115-197

## **FOREIGN PATENT DOCUMENTS**

FOREIGN PATENT DOCUMENTS						T <sup>6</sup>	
Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear		
		Country Code <sup>3</sup> - Number <sup>4</sup> - Kind Code <sup>5</sup> (if known)					
	AC	JP - 2002-159992 - A	06-04-2002	Boku, Wanchoru, et al.		✓	
	AD	WO - 98/07664 - A1	02-26-1998	Van Loosdrecht, Marinus Cornelis Maria, et al.			

<b>Examiner Signature</b>		<b>Date Considered</b>	
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\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. <sup>1</sup>Applicant's unique citation designation number (optional). <sup>2</sup>See Kinds Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 901.04. <sup>3</sup>Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup>For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup>Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. <sup>6</sup>Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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Substitute for form 1449B/PTO		<b>Complete if Known</b>		
		<i>Application Number</i>	10/588,256	
		<i>Filing Date</i>	7/29/2006	
		<i>First Named Inventor</i>	Schreier et al.	
		<i>Art Unit</i>	1724	
		<i>Examiner Name</i>	Not Yet Assigned	
Sheet	2	of	3	Attorney Docket Number
				4115-197

<b>NON PATENT LITERATURE DOCUMENTS</b>				
Examiner Initials*	Cite No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.		
	AE	DAIMS, H., ET AL., Novel Nitrospira-like bacteria as dominant nitrite-oxidizers in biofilms from wastewater treatment plants: diversity..., Water Science and Technology, 2000, Page(s) 85-90, Volume 41, Number 4-5		T <sup>2</sup>
	AF	HOVANEC, T.A., ET AL., Comparative analysis of nitrifying bacteria associated with freshwater and marine aquaria, Appl. Environ. Microbiol., August 1996, Page(s) 2888-2896, Volume 62, Number 8		
	AG	KLOEP, FRANK, ET AL., Performance and microbial structure of a nitrifying fluidized-bed reactor , Wat. Res., January 1, 2000, Page(s) 311-319, Volume 34, Number 1		
	AH	MEGONIGAL, J.P., ET AL., Anaerobic metabolism: Linkages to trace gases and aerobic processes, Biochemistry (W.H. Schlesinger, Ed), 2004, Page(s) 359-361, Publisher: Elsevier-Pergamon, Published in: Oxford, UK		
	AI	O'DONNELL, ANTHONY G., ET AL., 16S rDNA methods in soil microbiology , Current Opin. Biotech., June 1999, Page(s) 225-229, Volume 10, Number 3		
	AJ	PRINCIC, ALENKA, ET AL., Effects of pH and Oxygen and Ammonium Concentrations on the Community Structure of Nitrifying Bacteria from Wastewater , Appl. Environ. Microbiol., October 1998, Page(s) 3584-3590, Volume 64, Number 10		
	AK	RUSTEN, BJØRN, ET AL., Moving bed biofilm reactors and chemical precipitation for high efficiency treatment of wastewater from small..., Water Sci. Tech., 1997, Page(s) 71-79, Volume 35, Number 6		
	AL	RUSTEN, B., ET AL., Pilot testing and preliminary design of moving bed biofilm reactors for nitrogen removal at the FREVAR wastewater..., Water Sci. Tech., 2000, Page(s) 13-20, Volume 41, Number 4-5		
	AM	STROUS, MARC, ET AL., Missing lithotroph identified as new planctomycete, Nature, July 29, 1999, Page(s) 446-449, Volume 400, Number 6743		
	AN	TAL, YOSSI, ET AL., Characterization of the microbial community and nitrogen transformation processes associated with moving bed..., Aquaculture, January 10, 2003, Page(s) 187-202, Volume 215, Number 1-4		

Examiner Signature	Date Considered
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<sup>1</sup>Applicant's unique citation designation number (optional). <sup>2</sup>Applicant is to place a check mark here if English language Translation is attached.

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Substitute for form 1449B/PTO				<i>Complete if Known</i>	
				<i>Application Number</i>	10/588,256
				<i>Filing Date</i>	7/29/2006
				<i>First Named Inventor</i>	Schreier et al.
				<i>Art Unit</i>	1724
				<i>Examiner Name</i>	Not Yet Assigned
Sheet	3	of	3	<i>Attorney Docket Number</i>	4115-197
<i>(Use as many sheets as necessary)</i>					

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Examiner Signature		Date Considered	
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